

REMARKS

Claims 1 and 3-28 were previously pending in the application. Claims 10, 13-14, 19-21, and 24-28 are canceled; claims 1, 8, 12, and 16-17 are amended; and new claim 29 is added herein. Assuming the entry of this amendment, claims 1, 3-9, 11-12, 15-18, 22-23, and 29 are now pending in the application. The Applicants hereby request further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

On page 2, the Examiner objected to claims 13 and 28 under 37 CFR 1.75(c) as being of improper form. Since claims 13 and 28 are now canceled, this objection is now moot.

On page 3, the Examiner rejected claim 25 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. Since claim 25 is canceled, this rejection is now moot.

On pages 4-5 and 6-7, the Examiner rejected claims 1, 3-4, 6-11, 15-18, 20-24, and 26 under 35 U.S.C. § 102(b) as being anticipated by Lubbers. On page 5, the Examiner rejected claim 17 under 35 U.S.C. § 102(b) as being anticipated by Fernald. On page 6, the Examiner rejected claim 17 under 35 U.S.C. § 102(b) as being anticipated by Fleury. On page 8, the Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Lubbers in view of Wlodarczyk. On page 9, the Examiner rejected claims 12 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Lubbers in view of Fernald.

For the following reasons, the Applicants submit that all pending claims are allowable over the cited references.

Support for the amendment of claim 1 can be found, e.g., in original claims 13 and 14 (now canceled), in Applicants' Fig. 4, and on page 5, lines 14-28. Support for the amendment of claims 8 and 16 can be found in Applicants' specification, e.g., on page 6, lines 16-21. Support for the amendment of claims 12 and 17 can be found, e.g., in original claim 19 and on page 4, lines 25-28.

Amended claim 1 is directed to a sensing system having an interrogation device that comprises a plurality of light sources, an optical multiplexer, an optical de-multiplexer, and a plurality of optical receivers, all optically coupled to each other and to the plurality of sensors as specified in the claim. The Applicants submit that the cited references, independently or in combination, do not explicitly teach or fairly suggest such a combination of features. It is therefore submitted that amended claim 1 is allowable over the cited references. Since claims 3-9, 11-12, 15-16, and 22 depend variously from claim 1, it is further submitted that those claims are also allowable over the cited references.

Amended claim 17 recites, *inter alia*, first and second layers that form a Fabry-Perot interferometer (FPI) having a variable cavity length. The Applicants submit that the cited art, as applied in the office action, does not teach or even suggest such a feature. For at least this reason, it is submitted that claim 17 is allowable over the cited references. Since claims 18 and 23 depend from claim 17, it is further submitted that those claims are also allowable over the cited references.

The Applicants further submit that at least some of the reasons for the allowability of claim 17 also serve as additional reasons for the allowability of claim 12.

New claim 29 is equivalent to previously presented claim 14 rewritten in independent form. The Applicants submit that claim 29 is allowable over the cited references for reasons similar to those applicable to amended claim 1.

Since previously presented claim 14 (now presented as claim 29) was neither rejected nor objected to in the last office action, it is submitted that, unless the next office action is a notice of allowance, **the next office action cannot be properly made final**. For guidance on this point, the

Examiner is respectfully referred to MPEP § 706.07(a), which explicitly prohibits making the rejection final “where the examiner introduces a new ground of rejection that is neither necessitated by applicant’s amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c).”

In view of the above amendments and remarks, the Applicants believe that the now-pending claims are in condition for allowance. Therefore, the Applicants believe that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to **Mendelsohn, Drucker, & Associates, P.C. Deposit Account No. 50-0782**.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Respectfully submitted,

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